



Sundrie newv and Artificiall remedies against Famine.

*Written by H. P. Esq. vppon thocca-
sion of this present Dearth.*

*Non est quo fugias à Deo irato nisi ad
Deum placatum, Aug.*



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the signe of the Starre.

1596.



NEW REMEDIES

against famine.



He first, and principall, and most Christian counsel that I can giue in these threatning daies of sword and famine, is by harty praiers from a zealous heart to call vpon the name of the great and mighty *Iehouah*, and of the gracious and mercifull God of Israell, that it may please him to forget and forgiue our manifold sins and transgressions, which haue turned his fauorable countenance so long from vs, and broght downe from heauen so many clowdes of wrath vpon the fruites of the earth, as that the great hope of our haruest is smitten and daunted already, and that it would please him of his fatherly goodnes by such meanes as shall seeme best in his owne eyes, for the reliefe of these our present wantes, to turne this our penurie into plenty, and so to blesse vs with his bountifull hand, that we may all sing a full song of thankesgiuing vnto him, as wel for these new and vnderferued fauours, as for that glorious victory of late obtained against our popish aduersaries, by the hand of those honorable commanders that haue already begun the peace of our common wealth.

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Secondly,

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Secondly, I could wish that all inferiour officers in their places, would haue a more charitable and religious care in the execution of those orders, which haue of late beene penned, and published with graue and deliberate aduise from the higher powers for the furnishing of our markets with all kinde of graine. For the execution is the very life of the lawe, and the letter thereof though set downe by authority and graced with a most honorable *Chorus*, doeth giue some hope at the first, but no full satisfaction in the end vnlesse the executing magistrate, together with those high directors doe ioine hand in hand for the common good of their distressed countrie.

Thirdly, I cannot want good will to wish though I haue no authority to command, that the very food of the earth euen the blessing of the Lord, should be no longer subiect to this copy hold & slauish tenure, of such base & vnmerciful lords, who vpon euery rumor of foren scarcities, vpon euery petit transportation, yea rumour of transportation onely, vpon faire weather, or foule weather, or any weather if they list, can make the same finable *ad voluntatem Domini*, and set what price they list vpon the bushell. Is there no Court of Chauncery, neither in heauen nor vpon earth, to bridle these couetous and vnmercifull Lords, yea and to stint them, that howsoeuer it shall please the God and giuer of all thinges to crosse vs from the heauens, that yet no inferior person should dare to exceede a certaine price to bee set downe by authority, vpon the cōfiscation of whatsoeuer graine hee shoulde so ouerrate vnto his poore and needye neighbour?

Fourthly, if euer Abstinence were a true Christi-
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an vertue, then nowe let it appeare amongst vs, for why should the rich men feast, when the poore are ready to famish? was there neuer but one *Dives*, and one *Lazarus* vpon the earth? or doe we want wit, or will, or grace to apply a parable? Here I may wel cry out and say to the rich, and fat weathers of our time, as *Tully* sometime said to *Anthony*. *Te miror Anthoni, vt quorum facta imitèrè, eorum exitus non perhorrescere*. I wonder at you ô you Epicures that you are not terrified with their destructions whose deeds you seeme to imitate. Well if wee haue brought our pampered bodies to those delicacies, that wee can nowe aswell leaue our liues, as our lustes; yet if euerie rich man woulde spare but one meale in a weeke, and confer the estimate vppon the poore of the parish where hee dwelleth (*nunquam nimis dicitur, quod nunquam satis discitur*) I saie euen this one meale would serue wel to mend a whole weekes commons of a poore *Subscisor*.

My fift and last petition should bee to moue vs to a Christian charitie. And if that Romaine Poet and oratour, that sententious *Seneca* in the danger and distresse of a priuate friende could giue in precept: *Quòd amicorum necessitati magis occurrendum, quam succurrendum*, that we ought rather to preuent then relieue the necessity of a friend. Then what is to bee expected at our hands in a case of so great waight & importance, as doth not only touch the credit of our profession, but also the liues and welfare of many thousands of our poore Christian brethren, whereof some cannot labor, and many are without labor, and those which labor can hardly maintaine theselues by their labor. Yea if we would look more narrowly &

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pierce more deeply with a sharpe eye into the threats and terrours of these times, though religion could work no charity in vs towards others, yet reason, and ciuill pollicy might preuaile so much with vs for our selues and those which are deere vnto vs, that we should not stay so long vntill our neighbours flames take holde of our owne houses, nor trie the extremities that hunger, and famine may worke amongst vs.

Thus much by way of Christian aduise and counsell, nowe because I had rather be any way wanting then in good will vnto my natie Countrey, vnto the which I confesse that I owe my wit, my wealth, my labour, my life, and whatsoeuer else I possesse vnder my gracious foueraigne: and seeing that many graue, and learned sermons haue already in vain bearen vpon this Subiect, many careful prouisions haue beene from time to time made and published from our prudent, and prouident Prince, and from those honorable Senatours of our state, which as yet can work no impression in the steely, and adamant harts of our English Rookes and Cormorants, though I cannot win the goale in so great a purpose as I haue in hand, yet I wil bid the bafe to those choise, and delicate wits of England, who if they would either associate themselves vnto me at the first, or secōd me, when I haue begun this proud attempt, I would not doubt, but that by these our ioynt labours we should frustrate the greatest parte of these couetous complots, and by new, and artificial discoueries of strange bread, drinke, and food, in matter and preparation so full of variety, to worke some alteration and change in this great and dangerous dearth.

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Neuertheles(though I do only break the yce, for those that shal follow me in this kind) yet according to that poore talent of mine, I will trie mine owne strength and confer as well my conceipt, as knowledge herein : which though it bee neither such as I could wish, nor as these vrgent times require, yet I will be bold(in the fulnes of mine affection) to prefer and present the same to the view of the well disposed Reader, whose courteous acceptation hereof, may one daie peradventure wring from me some matter of higher reach, and farther seruice then as yet I see either iust cause to promise or reason to speake of.

And because in the treatise following my Author hath raunged ouer all manner of trees, plants, roots, greene pulse and herbes, out of which hee might by any probabilitie draw any kind of sustenance for the reliefe of man, I will onely content my selfe with the handling or preparation of some of these particulars which are most plentiful in their quantitie, least offensive in their nature and most familiar with our soile and bodies, so as their offensive taste beeing first remooued by arte, they may serue vs in a far better manner and to our greater liking then now they do, either for bread, drinke or food.

Howe to take awaie a great part of that ranke and unsauourie tast of Beanes, Pease, Beechmast, Chestnuttes, Acornes, Veches, and such like.

IF this may in some good measure bee performed, then I doubt not but that the bulke and body of our meale and flower will be much increased and multiplied

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plied at the least for the poore mannes Table: then receiue mine owne experience therein. Boile your beanes, pease, beechmast, &c. in faire vvater, and if they be not yet pleasing inough, change your vvater againe, and at the second or third boyling, you shall finde a strange alteration in taste, for the water hath sucked out & imbibed the greatest part of their ranknesse, then muste you drie them (and if you thinke good, you may also hull them, according to the manner set down hereafter in the Abstract of *Anchora Farnis, &c.*) or else you may grinde them unhulled, & then make bread thereof, either simplie of it selfe, or with the addition of some third or fourth part of other wheat flower; or else for better expedition at the least in drinke, if not in bread, you may take y^e ground meale of them, and infuse warme water thereon, and as it beginneth to coole, dreyn the same avway, and reinfuse fresh warme vvater till the taste please you: then drie vp the meale, and make bread thereof either simplie, or compounded as before. And as concerning the Chestnuts, we haue the experience of France therein already, vvhere in great abundāce they are spent and consumed in their vsuall bread in diuers partes of that Country.

The beechmast doth yeeld a most sweet and delicate oile, and euery waie comparable with the nut it selfe, and therefore it is very probable that it wil make an excellent bread with a very smal correction: & if there might be some easie vvaie or maner found out for the ready husking or hulling of them (which seemeth no matter of any great difficulty) then I durst promise a most rich & plentiful oile of our own growing, and seruiceable for many necessarie vses. But
if

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if notwithstanding my former preparation of beans, pease, &c. the meale thereof do not yet content you, then worke it into paaft, with a liquor first strengthened with some brused Annis feedes, licoras, or sweet Fennell feedes, or with the feedes themfelues incorporated in the paaft, or for the auoiding of charge with pepperwort, Thyme, winterfauery, penniroyal, &c. For if you can but deceiue the taste, you shall find the bread very harty, wholsome, & nourishing. And whatfoeuer is here spoken of beanes, pease, &c. may bee generally vnderstoode of all other graine, feedes, plants, pulse, rootes, &c. And that which is seruiceable for bread, wil be much more tollerable in drinke: for the making wherof in some more cheap maner then as yet is known or vsuall amongst vs you shal find some few notes of mine vpon the Abstract following, in their seuerall places.

Certaine strange and extraordinarie waies for the relieuing of a prisoner, or other poore distressed creatures, when al hope of vsual victual is taken from him

THese as I dare not warrant, so yet because I haue receiued them either from good Authors, or frō the credible report of men of woorth, I will deliuer them as faithfully as I haue receiued them.

1 And first of al *Paracelsus* himselfe affirmeth, that a fresh turfe or clod of earth, applyed euery daie vnto the stomach of a man, will preferue him from famishing for some smal number of daies.

2 I haue heard many trauailers deliuer of their own knowledge and experience, that a man may liue 10. or 12. daies by sucking of his owne bloud.

3. *Bapt. Port.* telleth vs of a poor fellow vpon whom a ruinous house fel, and the man so hedged in vvith

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the floores and timber that fel vpon him, as that not being able to get out, he vvas forced to relieue himselfe with his owne vrine for 9. or ten daies, making his hand his cup to drinke in.

4 But the strangest and most incredible of all the rest, is that story which Parson *Bateman*, sometime Parson of *Newington*, had by relation of that reuerend father *D. Grindal* then *Archbishop of Canturbury*, from the mouth of two English captiues, y were imprisoned in Turkey, and for their offence condemned to bee famished to death, and escaped by this means. The keeper affecting his prisoners for those good parts which he found in them, hauing receiued an oth of their secrecie, deliuereth vnto each of the a smal peece of Allom, which hee willed them fise or six times a day to rowle vppe and downe in theyr mouthes. Nowe at tenne daies ende, the great Turk sending to knowv if the christians were dead or aliue, and being informed of their liues, he commaunded that vppon paine of death no manne should dare to relieue them with any maner of food. Now when 10 daies more were expired, and the like inquirie & returne made as before. Wel, qd. the Turk, if they can continew yet 10. daies more without food, I will say y the God of the christians wil haue them preserued, and they shalbe enlarged. The last 10. daies expiring, and the prisoners liues certified vnto the Turke, they were forthwith deliuered out of prison, and returned for their ovvn countrey, and here discovered the secret. The reason, and probabilitie hereof I vvill leaue for better *Magicians* then my selfe. For though vve might suppose that the salt of nature might receiue some strength or vigour from this minerall salt, yet hovve the guts should bee filled vvith so small a pro

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portion I cannot gesse much lesse determine.

5 ¶ A fift foode but receiuing some helpe from corne vvas commended by *Mendoza* himselfe, wherewith he assured me vpon his honor that he had relieued a Spanishe towne, in an extreame dearth, and scarcity of victual, and therewithall shewed mee a loafe of that composition, which was of wheate straw, chopt into short peeces, and ground with som proportion of wheat into meale. But since I haue beene farther informed, that the same practise hath beene vsuall in harde yeares in some partes of England, and for mine owne better satisfaction, I caused some of the same flower to bee kneaded into bread, but it was verie browne in colour, and verie grettie in the mouth, and therefore it shoulde seeme that our stones be not so apt for the grinding of it, & I haue heard some affirme, that the same cannot wel be ground but in a steele mill, or hand mil.

6 And the East Indians, as I haue read, do vse to make little balles of the iuice of the hearbe *Tabaco*, and the ashes of cockle shels wrought vp together, and dried in the shadowe, and in their trauaile they place one of these balles betweene their neather lip, and their teeth, sucking the same continually, and letting downe the moysture, and it keepeth them both from hunger and thirst for the space of three or foure daies.

7 The seuenth and last of this kind, is that sweet root called *Licoras*, which beeing chewed onely (if vve may beleue *Pliny*) doth in small quantitie satisfie both thirst and hunger, and yet maintaine sufficient strength in the body.

How to make an excellent bread of the rootes of Aaron called duckowpit, or starch rootes.

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THe making thereof is set downe by a late writer in this manner. First, the rootes that are large must be clenfed from all skin and filth, and then cut into small and thin slices, the thinner you make them the sooner they are prepared, seeth them in boyling vvater, so long as you finde the water hot and biting, and til the roots begin to waxe svveet. Then change your vvater, and poure fresh water vnto them, and so continue boyling vntill the vvater become sweet, and that the roots haue lost al their acrimony. Then take them out, and lay them abroad vpon Canuas, supported with frames, and being drie grinde them with hand mills, and they make a most white & pure meale, which either of it selfe, or by the mixture of one thirde of wheate meale with it, maketh a most faire & sauory bread. This carieth some good sence and likelihood of truth with it, for we finde by dailie experience, y it maketh as faire, if not a fairer starch, then our vvheat. And therefore it were to be wished, that some good husbandry were vsed in the planting, and multiplying of these rootes, obseruing the nature of such soile and place wherein they most delight. And though it should faile vs in this kind, yet we shall finde our labor richlie requited, if wee conuert them into starch only. But here it is to be remembered, that the root must be gathered whē it is plump full, and in his pride, which is about the latter end of March, and April al: for vvhen it beginneth once to spire, and that the sap is run vp into the leaues, then the root shrinketh, & also loseth much of his vertue. Here a iust occasion is offered to practise the like vpon the Turnep, whereof there are both good store
and

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and the price of them likewise very reasonable.

Bread, and other food made of Pompions.

THis fruit being both cheape, and great, doth also make a very sauerie bread, if a little meale be mixed therewith, yeelding food to a great number with a small charge. And if you bestowe sugar, and other sauce vpon it, it may also passe for a delicate dishe. The maner of making the same is thus described by *Porta*: Choose the greatest and ripest Pompions, cut them into thinne slices, and take away the hard crust or coat, and the inner marrowe or softnes, seeth them in boyling water, & bring them to a pulp or pap, and then streine it, adding therto a third part of meale or flower, and make it vp into bread, the fresher you eate the same, the more pleasant & delicate you shal esteeme it. But with mine Authors fauor: I thinke you wil find it in his best forme, and of farthest extention, when it is in his pap or pulpe, for his body is exceeding waterish, and vanisheth away to a small substance if you seeke to dry it. This I write by mine ovne triall, yet peradventure the Goord of Naples, which he calleth Cucurbita, may bee of a differing nature from our Pompions.

How to saue much flower, or meale that is lost in all our vsual Corne mills, that grinde either with winde or water.

IF I teach the Miller so to grinde his wheat, as that neither the starchmaker (if I be not deceiued) shal haue stufte to make his starch with, except he grinde for himselfe after the ancient maner; nor the brown Baker any bran to make horsebread withall, I hope

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that my fault will be pardonable at this time, because I hold it much better to want flower about our necks then in our bellies, and that horses should starue before their maisters. The conceit is short, and easie, and I hope without controlment. Let euerie Mill that grindeth corne, haue also a boulting mil annexed vnto it, that the same mouer may play vpon both, and by shaking of the boulder make a diuision of the bran from the flower. This bran as soone as it is diuided from the flower must be returned againe into the hopper amongst the rest of the wheat that is vnground, and so as fast as you gather any branne, you must mixe it with more corne: and by this meanes you shal haue much lesse bran, and also more flower, thogh you would notwithstanding this course, passe the same through a fine boulder againe. It is an vsual maner in the higher part of Germany to bould with these milles, but not to grinde ouer their bran againe in the first mill, for ought that I know, or as yet can learne.

How to make starch without any corne.

IT is wel knowne that those *Maron* rootes before I mentioned, wil make a vvwhite and delicate starche. You must gather them in March or Aprill, washing them cleane, and paring avvay all the filthe, or foule skinnes from them, and after slicing them into thin slices, and so leauing them in faire cleere water, and changing your water euery 12. houres, for the space of foure or fve daies, till they become exceeding white and cleane; then stampe them, and force them through a strainer with cleane water, and when the substance of the starch is settled in the bottom, which will

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will be in a few houres, then dreine away al the cleere water that fleeteth on the top, very gently, and expose the rest being in flat earthen pans or cleane tubs to the Sun, which will attract or drawe vp all the water, and leaue a hard cake in the bottome. But in the winter time, when you cannot haue the Sunne of a sufficient force for this purpose, then set your stone pannes, or pewter basons wherein you haue strained out your starch vpon a pot with scalding water, and so you may drie the same in a sufficient quantity for your own vse all the yere long. And if you wold harden the same without charge, then place your pan vpon your biese pot, & so you shall make one fire to performe seuerall actions at once. But because these rootes are not to be had in all places, nor at all times of the yeeare, therefore for a second supplie I haue thought good to set downe this receit following.

Take of the whitest *Gumme Arabique* that you can buy at the Grocers, let them beat the same into peeces for you as big as hasell nuttes in their great morters, then take 3. ounces of this gumme, & first wash it in faire conduit water, in a stone bason, stirring it vp and downe with your hands to take the filth from it; then wash it againe with some more water, and powre that also away, and then to euery 3. ounces so washed put a wine pint of faire conduit water, stirring it vp and downe 3. or 4. times a daie to procure a speedie solution or dissoluing of the gumme: then couer your pan, and when all the gum is dissolued, streine the vvater through a cleane and thin linnen cloth, and reserue the same in glasses well stoppt, till you haue cause to vse it. It will last sweete at the least three weekes after it is made. When you would vse

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this starch, if you desire to haue your ruffes to carie a pure & perfect white colour, you must mingle some blew with the water, stirring it vp and downe vwith your finger in a porrenger, and before the blew settle to the bottome, wet your ruffe therein, and presently wring it out againe; then pat it till it be cleare, and after set it, as you doe in your common starch. I doe finde by experience, that halfe the time that is lost in y other maner of starching, is here gained: for by reason that your starch is in a thinne vvater, the Lawne & Cambricke wil be soone cleared, and with much lesse beating. And I think that a second profit will here likewise fall out by the way, viz. that your Lawne and Cambricke wil last much longer: for (if I be not deceiued) the continuall pating, or beating thereof betweene the hands in our vsuall starching, worketh a great fretting and wearing of the same. And I doubt not, but that there be many other sortes of graine, pulse and rootes, which wil make as good starch as vvheate, which at this time I leaue vnto the studious indeuours of those that are carefull for the common good. It may bee that at my better leisure I may handle this subiect more at large, but now the present times inforce me, to deliuer that knowvledge which I haue. And thus much for starch.

*Sweete and delicate cakes made without spice,
or Sugar.*

SLice great and sweete parsnep rootes (such as are not seeded) into thin slices, and hauing washed & scraped them cleane, dry them, and beat them into powder (here a mil would make a greater dispatch) searcing

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searcing the same through a fine searce, then knead two partes of fine flower with one part of this powder and make the same into cakes, and you shal find them to tast very daintily. I have eaten of these cakes diuers times in mine owne house *Quere*, what may be done in carots, turneps, and such like rootes after this maner.

Here I thinke it not impertinent to the purpose, which I haue in hand to wish a better suruey to bee made of my booke of Husbandry, being a parcell of the Iewel house of Art and Nature, printed an. 1594. Wherin sundry new sorts of Marle are familiarlie set down, and published for the good of our English farmers: amongst the which, those waste ashes of the Sopeboilers (for such as dwel neer vnto the Citie of London, or may by easy water cariage conuey them vnto their hungry and leane grounds) haue a principal place for y^e enriching of al cold, moist & weeping grounds. The book is to be had at the Greyhound in Paules churchyard. And if there were such plenty as I could wish of those shauings or cuttings of horne, wherof those y^e work for lanthorns only make y^e greatest store, I would the in respect of the infinit extension therof, cōmend that before any other manuring of ground whatsoever, & for the only garden dōung y^e I know, although for arable ground I must needs confes, that I haue one secret, not as yet made known or common to the world, that wold proue more general, & more easie of price then any other whatsoever that I as yet haue either heard, or read of, but for som reasons best knowne vnto my selfe, I doe as yet forbear the discouery therof.

There is also a certaine victuall in the forme of
hollovv pipes, or wafers, wherewith, as also with a
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defensatiue oile for his armours, peeces, and other weapons, I furnished sir *Frances Drake* in his last voyage, which hath beene well approued and commended by sundry of his folowers vpon their return for England, whereby I was the more encouraged to make a second triall thereof in the Beare vvhich vvent latelie for *CHINA*. This foode I am bold to commend in this place, both bicause it argueth *ad propositum*, and for that I knowe that if the maisters, owners, or Mariners of ships, vvould aduisedlie looke into it, they shoulde finde it one of the moste necessarie, and cheape prouisions that they could possibly make, or carie with them. The particular commendation whereof, resteth vppon these few branches following:

1 ¶ First, it is very durable, for I haue kept the same both sweet and sound, by the space of 3. yeares, and it agreeth best with heat, which is the principal destroyer of Sea victuall.

2 It is exceeding light: for which qualitie Sir *Frances Drake* did highly esteeme thereof, one man may carie vpon any occasiō of land seruice, so much thereof, as vvill be sufficient to relieue two hundred men a day.

3 It is speedily dressed, for in one halfe houre, it is sufficientlie sodden, by which property it may also saue much fevvell and fiering, which occupieth no small roome in a ship.

4 It is fresh, and thereby very pleasing vnto the Mariner in the midst of his salt meats.

5 It is cheape, for in this dearth of corne, I dare vndertake to feed one man sufficientlie, for 2. pence a meale.

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6 It serueth both in steede of bread and meate, whereby it perfourmeth a double seruice.

7 Not being spent it may be laide vp in store for a second voyage.

8 It may be made as delicate as you please, by the addition of oyle, butter, sugar, and such like.

9 There is sufficient matter to bee hadde al the yeare long, for the composition thereof.

10 And if I might once finde any good incouragement therein, I vvould not doubt but to deliuer the same prepared in such sort, as that without anye farther dressing thereof, it should bee both pleasing, and of good nourishment vnto a hungry stomach.

¶ Al those which are willing to victual their ships therewith, if they repaire vnto me, I wil vpon reasonable warning, furnish them therewith to their good contentment.

A speedie or present drinke which Trauailers may make for themselves (extempore) when they are distressed for want of good beer or ale at their Inne.

TAke a quart of faire water, put thereto fiue or six spoonfuls of good Aqua composita, which is strong of the Annis seedes, and one ounce of Sugar, and a branch of Rosemary, brew them a prety while out of one pot into another, and then is your drinke prepared. Or if you leaue out sugar, it wil bee pleasing enough. I haue beene credible informed that diuers Gentlemen of good credit, when they trauail abroad, and cannot like the taste or relishe of theyr drinke, that they vse no other then the asorsaid composition, and find the same both to refresh and coole

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them very well, neither are they troubled with the rawnesse of cold water, by reason that it hath received some correction by the Aqua composita, & that the Annis feedes doe giue a delicate taste vnto it. It were not amisse for all Seaman to cary some store of Aquauitæ with them, that when their wine, Cider, Perry, and beer are spent, they may transmute their water into the saide drinke.

*A cheape liquor for poore men, when malt
is extreame deere.* ✱

IF a poore man in the time of flowring, doe gather the toppes of Heath with the flowers, which is vsually called and knowne by the name of Linge in the Northerlie partes of this Realme, and is that plant whereof our common heath brushes are made, and laie vppe sufficient store thereof for his own prouision being well dried and carefully kept from putrefying or molding, he may at all times make a very pleasing and cheape drinke for himselfe, by boiling the same in faire water, with such proportion thereof, as may best content his owne taste. And this liquor is commended vnto mee, by one of the most sufficient professors of Physicke of our times, and that vpon his ovne and often experience, for a most wholesome and medicinable drinke, as vvell for the Liuer as the Spleene. It may be graced with a little licoras in the decoction, if he see cause.

¶ I haue also heard Sir Frances Drake affirme, that faire water and vinegar mixed in a due proportion, doth make a fine cooling and refreshing drinke
in

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in hot wether, which he esteemed for a rare secret at the Sea. And I haue also knowne them that haue made a voluntary drinke thereof on the lande, when they haue hadde sufficient choice of others before them.

*How to brew good and wholsome Beere, without
any Hoppes at al.*

Since my profession in this booke, is in some sorte to anatomize both Art and Nature, without anie regard of priuate mens profits, whom it either may essentiallie or accidentallie touch, I am bolde therefore, without crauing any leaue to doe good: to renewe, or rather to confirme and ratifie an ancient opinion & practise, which long since in the great dearth and scarcitie of hops, many brewers of this land haue beene inforced to put in vse for the better supportation of their weake and declining estates. But because they failed in proportion (without the which there can be nothing compleat or absolute) they suffered a good conceit to die in the birth. And no maruell then, if wormwood notwithstanding it bee a simple so highly commended of all the ancient and newe Herbarists, for his great and singular effects in Physicke, be in a maner vtterly abandoned of al the brewers in our time (except a fewe that can make a difference betweene five shillings, or 5. pound charge, when hops are solde for 50. s. an hundred) seeing as yet not any one of them hath so clerkly wrought vpon this simple, as to couer and hide the tast therof, from the wel mouthed ale-cunners of our commonwelth, which weaknes of theirs, because it consisteth wholly in

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the want of a due proportion between the mault and other beereorne, in respect of vvormwood, I haue thought good to set downe a sufficient direction for those that are wise, and willing to doe good both to themselues, and to their countrey, wherby they may easilie euen in one daies practise attaine to the full perfection therof. Supposing then that your wormwood is either cut down in the leafe before it be seeded, or being seeded that it is cut into short peeces, whereby there may be made an equal mixture of the whole bulke together (for you muste note that the seedie tops are much stronger and much more oylie then the rest of the leaues or stalkes) make first a decoction of 4. ounces of hoppes with nine gallons of water (which is the proportion which some Bruers in some sorts of drinke doe vse) and when you haue gotten out by ebullition or boyling, the full strength and vertue of them, keepe the same, and begin likewise with some small proportion of wormewoode to the like quantitie of vvater as before; and vvhen you haue bestowed as much time and fire therein, as you did about the hops, then taste each of them by it selfe, and if you finde the same to exceede the first in bitternesse, then beginne with a lesse proportion of Wormewood, and so reiterate your worke, till you haue equally matched the one with the other: then may you safely proceed by the rule of proportion to a barrell, and from thence to a tun, and so to a whole bruing. Neither let the bitternesse of Wormwood in his present taste any thing dismay you, for if you did but taste the decoction of hoppes onelic before the mixture of ground malt (which doth wonderfully sweeten the same) you would thinke it a very vn-

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against Famine.

apt licour to be wrought vp into so pleasing a drinke as our ordinary beere doth shew it selfe to bee: for it is the hop onely which maketh the essentiall difference betweene beere and ale, and that by alaying the exceeding lusciousnes of malt by his bitternes, whereby both vniting themselues together, become a saourie and wholsome drinke for mans bodie: which may be in euery respect as well performed in wormwood, as in the hop, yea, & peraduenture with Centaury, artichoke leaues, or *Aloes hipatique*, as some workmaisters haue confidentlie affirmed vnto mee. And though the hop bee vsuallie in drinke, and the wormewood onely in medicine, wherby some may happilie be perswaded, that it is inconuenient for men that are in health to drinke a medicine continually to their meate: yet let this be a sufficient answer to that obiection, that it is the dose only that maketh the difference heerein. For I can assure you in mine owne experience, and by the experience of one of the best experienced Bruers in London, who yet liueth, that if you giue a double or treble quantitie of English hoppes to an ordinarie guile of strong beere, you shall finde the same to bee a sufficient preparatiue to your body for the best purgation that shall be ministred after. And this is the reason whie Venice Turpentine, which being ministred in a smal dose, is giuen for the strengthening of the back, and to stay the running of the reynes: yet if it be taken in the quantitie of an ounce at once, it will purge sufficientlie in diuers bodies. So then either let there be no more taste of wormewood, then there is of hops in our drinke, and we shall finde no difference in effects, but such as shall commend and grace y worm-
wood

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wood beyond the hoppe; or let beere bee aduanced with the hop to the bitternes of wormwood wine, & so we shal find the hop far to exceed the wormwood in his maligne qualitie.

Thus much I haue thought good to publishe, for the credit of wormwood and for the benefit of this lland in sundry respectes, which I shall not neede to particularize at this time, because they are so commonlie knowne to all men. And though I knowe I may be ouerweyed either with the Flaunders Merchants, or with the great hopmaisters of Englande, whose foundation is so deeply laide, that a fewe loose lines can neither shake nor stir the same: yet eyther knowing or at the least perswading my selfe to maintaine the truth, before I giue it ouer, I will craue the libertie of the schooles, *quòd fiat controuersia*. And in the meane time, those which will not bee satisfied of the wholsom and rare medicinable helps of the one, together with the weake and feeble vertues of the other (which was but a hedgebird the other daye, thogh now it be perking so prouddie vpon his poles) I wil refer them to the learned Herbals of *Dioscorides Matheolus, Doctor Turner, Dodoneus, Turnixerus,* and the rest.



*An abstract of certaine frugall notes,
or obseruations in a time of Dearth or famine, con-
cerning bread, drink, and meate, with some other
circumstances belonging to the same, taken out of
a Latin writer, intituling his booke, Anchora fa-
mis & sitis.*

First, for the auoiding of all putrefaction, aswell in bread, as in corne, it is very requisite that they bee perfectly dried, or gentlie parched, either in the sun, or by the warmth of the ayre, or else in the want of these two, in some apt ouen, *or rather in a Stoue*, but with such care, as they doe not burne, or sauer of adustion.

2 After the baking of your bread, it is necessarie that the same be left in the ouen, wel closed, for some reasonable time, the heate thereof being lessened by degrees, for so the bread being thoroughly baked, & suffered to coole of it selfe again, will satisfie the hunger of a man in double proportion to that which otherwise it would.

3 Each kind or sort of bread being a little tosted ouer the coales, and afterwards sopped in wine, will fill or glut exceedingly: such a breakefast as this taken in the morning, is a sufficient repast for the vvhole daie after.

4 The meale of parched corne doth fill the gutte exceedingly.

5 Bread may bee made of Rice, Indian millet, or Turkish wheat, either by decocting the whole grain in water, and so bringing it to the forme of a pulteis, and after baking the same, or else by grinding it into meale, but the latter way maketh the fairer bread.

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This may as sufficientlie bee performed with our ordinarie wheat, for ought that I can imagine.

6 All maner of pulse, as Lentils, vetches, beanes, & such like, if they be first rubbed ouer in Lee, & then hulled and after ground, they will yeelde both fayrer meale, and better bread.

7 Paaft, or dovve is soone baked vpon thin plates of iron or brasle.

8 Those which ride poste, are oftentimes content both to bake their bread, and also to rost their meate vnder the seates of their saddles, *here I think that our climate will proue too cold.*

9 Men must be brought by degrees, and not too sodainlie from their vsual and natural food and drinke, into these artificiall diets.

10 A pulteis or hochpot, made of flower or meale sodden amongst apples, peares, plums, and such like fruite, or of some bread and water, or the broath of fleshe that hath beene tosted in the smoke, or vvith milke wel boiled together, doth fil the stomack more then thrice so much of dry bread eaten alone, especially, if the same be high boiled to a stifnes, or consistencie.

11 Such like compositions do also extend farther in the satisfieng of hungry mawes, being made of Biskets, or dry, hard, or stale grated bread. And by this meanes one loafe wil go as far as two new loaues.

12 All sortes of good cakebread, or spicebread steeped a conuenient-time in faire vvater, will conuert the vvater into a most pleasant or wholsome drinke, the bread notwithstanding being very wholsome to be eaten.

13 Pound your pepper, ginger, and such like spices,
and

against Famine.

and hauing steeped them in water, place the same well couered ouer a gentle fire, and then worke your paast with the imbibition, or decoction therof. And by this meanes your spice will extend much farther in cakebread. And the same spice also being nevv pounded or beaten, may bee afterward wrought vp in paast for cakebread. Here you may practise vpon these plants, which be hot and wholsome withall: as the wilde Cresses, otherwise called Pepperwort, Galingale, Thime, Orrace, Isop, Wintersauery, Penniroyall, and such like hearbes in stead of spices.

14 Some of these artificiall kinds of bread & drinke, if there be any left that may be wel spared, will serue for the feeding and fatning of cattel, geese, Hennes, Hogs, &c.

15 The smell or sent of bread (*I thinke hee meaneth that, which is new and hot from the Ouen*) doth nourish the body, and refresh the spirits greatly. Some commend the spirites of bread extracted by distillation, as a most soueraign preseruatiue in the consumption, and other pining diseases.

16 If any of these artificial foods or dringes doe happen to offend, either in colour, tast, or sauer, they may be helped with hony, sugar, saffrō, wine, annis seeds, Coriander seedes, *sweet Fenel*, Cinamon, and such like.

17 In the time of necessity, euen greene corne taken as it groweth of it selfe, or a little parched or dried against the fire, or steeped, or boiled in wine, or water, affoordeth a reasonable kind of sustenance.

18 The distilled water of oats, doth so warme y^e stomach, as it doth overcome the senses. *It is wel known that many do brue a verie strong & mightie drink with*

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malted

New remedies

malted oates, and howe profitable the same might bee to all our English Brewers (if there might bee sufficient store of them had) in a dearth of wheat and barlie, the same being rightlie matched, or rather mastered a little with the hop, to alter their tast: they can best tell that haue made their priuate experience and profit of them, when others very inconsideratly haue runne on in their common, and chargeable course of brewing.

19 The licour of the Birch tree is both wholesome, and sauerie, and deserueth to be recommended in his kind.

20 There may bee an excellent extraction made of ale, which you may terme either a spirit, or a quintessence, and that in a smal dose, far more excellent then all the tartareous, sulphureous, or mercuriall preparations. *If the Author do heere meane any philosophicall course, it will bee both too curious and costly for the common sort of people: if onely a well rectified Aquauitæ, or an euaporation of the phlegmaticke parte to a thicke body, I cannot see how we shal raise any store, or quantity of matter to furnish the subiect which we haue in hand. If he meane physically, we will reserue the strict examination thereof, till a fitter occasion bee offered.*

21 The meale of such corne as is ground in the month of August, is remembred amongst the writers of best credit, to keepe and last best all the yeare after.

22 Such bread as is made vp of the flower of dry beanes is most strong in nourishment, and may bee corrected of his taste by the addition of Comin-seed. And it is also a vsuall matter in Germanie to make drinke of Beanes. *Our English Brewers doe also*
finde

against Famine.

find good vse of them amongst other corne in a smal proportion, wherein they haue a special care not to surcharge the rest of their beere corne, with too great a quantitie of Beanes, least they should giue a bad smacke or farewell to their beere: but I am verely perswaded that if either beanes, or pease were artificially handled according to the maner before expressed, that they would not onelie proue seruiceable, and that in a large maner for Beere only, but also for the making of wholsome, sweet, and delicate bread.

23 Of Veches first hulled, and of the hearbe Aphace, which receiueth diuers translations, and is called Dandelion, Priestes crowne, Swines snowt, Monks head, Dogs teeth, or common Cicory, may be made a bread so as it be mixed with a conuenient proportion of other vsual meale, for it yeeldeth a verie faire and sauerie flower, as the Authour testifieth of his owne experience: the same may bee corrected with Annis seede, Fenell seede, Coryander seede, &c.

24 Both bread, and drinke may also bee made of Lentils.

25 Breade may bee made of Pannicke, as also of Millet, whose seede euen in a small quantity doth arise greatly both in bulcke, and substance.

26 A solid, and wholsome bread may be made of wheat starch. But such bread, by reason of his price, will haue no fit place heere except euery priuate man do make his own prouision.

27 A decoction of Annis seede, Fennell seede, Caraway seede, and such like, either in wine, or water, is a most wholesome drinke. Hereunto may be added a decoction also of Licorae with Annis seedes together

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gether in faire water in a dew proportion.

28 Of Beechmast, Acorns, and the barks or rapping of trees that are wholesome, a conuenient drinke may be had.

29 Mushrooms will spring abundantly if you slit the barks of the blacke, and white Poplar, and burie them in furrowes wel doüged. So likewise the white Poplar being cut off close by the ground, and watered with warme water well seasoned with leauen, in foure daies space will bring forth most pleasant, and delicate Mushrooms. *These being dressed in their kinds are accompted amongst the most lusty, & stirring meats with the Italians.*

30 A good bread may be made of the Rape, or Nauew, being first scorched, and after sodden, and then baked.

31 A breade may bee made of the powdred, or ground leaues of the peare tree, apple tree, beech & oake, and so likewise of drinke.

35 Dow may be kneaded vp with wine, vineger, or ale, if you would make the same hot, and harty. *But I thinke the new must of wine, or the best wurt of ale, or beere much better, for that we may wel doubt, or rather assure our selues that the whole spirit of wine, or ale wil flie away in the baking, because the same had first wrought it selfe into a bodie, whereas in wurt that neuer came to workemanship, the fire or spirit doth as yet lie close, and couched within it.*

33 A dronken breade may bee made with spirit of wine and flower. *But I thinke that common Aqua-composita would proue ouerchargeable.*

34 A paast consisting of meale, and the oyle of Oliues

liues, or other fruit, or seeds mixed together may be made into bread.

35 Mizaldus reporteth of a certaine Trauailer, who vndertaking a long iourney did relieue himsefe with one pound of the oile of Violets, and soft grease mixed together, and therewith he preserued himselfe by the space of ten daies. The like effect hath also beene found in the oile of Almonds mixed with the grease of a Cow, and that by reason of the clammines thereof.

36 A bread made of Egges is both wholesome, and more filling then other ordinary bread, but especially if the same bee kneaded vp with the yeist of the strongest beere or ale.

37 Those eggs are most carefully to be gathered, and kept, which are laid from the new moone in August, others do rather commend the waine, and the time of both the Sunsteads. And newe laid eggs will keepe long in dry chaffe, or bran.

38 An excellent bread may be made with milke either leauened, or vnleauened, and of exceeding nourishment being taken but in a smal quantity, but they fill more if resty bacon being fried bee also incorporated therewith.

39 A man may liue with milke only, and it wil serue instead of meat, and drinke, and medicine.

40 A glutting kind of bread may bee made of newe cheese, and likewise of olde being grated; mixed, and wrought vp with meale. For it commeth all to one ende whether we eate breade and cheese seuerally, or both mixed together.

A petition to the curteous Reader.

HEere I haue thought good (Gentle Reader) to intreat thus much fauor at thy hands, that seeing my new fire of Coleballes, together with some other fewe inuentions, first mentioned in mine Apology, do as yet attend some courly fauours, wherby they cannot so presently as I wish, breake foorth into the publike seruice of this land: that thou wouldest for a little time (which I hope is now drawing to his period) intertain them with a good conceipt and kind opinion, not regarding the censures of those ignorant, or malicious spirits of our age, who presuming to know the simples of my fire, may happily range into base and offensive matter, and thereby labor to discredite that secret, whose composition they could neuer yet reach vnto, nor, if they had the particulars, were they able to combine & knit them with their lefthanded workmanship.

And for the better satisfaction of my well wishing friends, & the full confutation of mine undeserued foes, I would haue them to vnderstand, that seeing the premised secrets, haue not onlie bin seen, and alloned, but at this present are also countenanced by those which are right Honorable in their places: that from hencefoorth they will scorne the malice both of viperous tongues, as also of slanderous pens, if any man should happen to bee so extreame lie, or desperat elie mad, as to take vpon him to argue vpon that proiect, whereof he can neither finde a medium, nor communes terminos, and therefore impossible to conclude Sillogisticè sinon in Bocardo against it.

And if I shal heere discover a secret both newe and profitable for our English Maltsters, whereof as yet there is not so much as any model extant, and that I could fal into M. Ajax veine, and had some of his glib paper, & gliding pens, I might soon scribble ten sheets, and sell euerie sheet for twopence, towarde necessarie charges: and in the end conclude the expectation of manie leaues, in a few sweeter lines then he hath done before me: but because I wil bind my selfe to no such priuy presidents, I will deliuer my conceipt in as plain and naked tearmes as I may.

New Malt kils for wood or Seacole.

INstead of those spars which support the hearecloth place a few single quarters, sawed in equall partes, here and there scatteringly, or make what other deuise you shall thinke best, to beare a floore or platforme of lead, which (for the auoiding of charge) may be made of sheet lead thinlie driuen: and if you meane to vse Seacole, then must you haue a grate of yron bars to lay your coles on, and let there be foure vents within a foot of the floore, made in equall distance each from other, both to draw vp the heate and steame of the fire, as also to conuey the smoake by smal leaden pipes into some woodden trunk or tunnel of brick or plaister: and if you find the lead too hot for the barley, you may either lessen your fire till you haue attained a true degree thereof, or else you may spread a hearecloth vpon the lead, and so auoid the danger of hastie malting, peraduenture y^e steame of boiling water, issuing out of a great copper vessell
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being placed ouer the fire, may giue a sufficient heat for this purpose. And heere I hope, that both the bad sent and tast which is vsuallie found in wood dried-malt, as also the continuall attendance vppon a straw fire will be much auoided: besides that sauing which wil fall out in such shires, as affoord either wood or Seacole in any plentifull manner. I haue beene also credible informed, that a fire of beane stalkes, maintained in an vsual kill, will defraye his owne charge, by reason of the ashes, which are more worthe then the fewell it selfe. But whether they serue best for the making of glasse, sope, or salte Peter, I cannot determine, onely I know them to be full of a strong and sharpe salt, and such as serueth the Surgeon to make his *Cawsticke* withall.

*A new and extraordinary meanes for the
inriching of arable grounds.*

ANd because the multiplying of corn is not greatly abhorring from our purpose, and seeing the greatest part of Dearth, must of necessitie begin from scarcitie of graine, I will here (without praying in aide of M. *ALAX*, or of his stale marginal notes, whose reformation hath already more offended the eares of Honorable persons, then his first faults could euer offende their noses) make a publike offer to all those Gentlemen and Farmers of England, who dwell in such partes of this Realme, as doe neither yeeld any store of Marle, or other common and ordinarie dung or soile, how they shall bee sufficientlie furnished, with a newe and plentifull *Compost*, and whereof there haue beene already sundrie
and

and rich trials made, whose quantitie shall not ex-
ceede eight bushels, whose yearelie charge shal not
amount to xviii. pence the acre *communibus Annis*,
one year with another, and whose nature is so trans-
muted and disguised, as that one neighbor, yea M.
Aiax himselfe, though he were present at the dis-
posing or scattering thereof, shall not be able to dis-
cerne what his next neighbour hath doone to his
ground. In which secret, all those whome the au-
thor shal finde willing and worthie of the same, may
vppon reasonable composition, become owners
of the skill, aswell for their owne as for the good of
their countrey. Neither doe I know any iust obie-
ction, why the same should not enrich aswell pasture
ground as arable.

FINIS.

